**Section 725.193 Preparation, Evaluation, and Response**

a) The owner or operator must prepare an outline of a groundwater quality assessment program. The outline must describe a more comprehensive groundwater monitoring program (than that described in Sections 725.191 and 725.192) capable of determining each of the following:

1) Whether hazardous waste or hazardous waste constituents have entered the groundwater;

2) The rate and extent of migration of hazardous waste or hazardous waste constituents in the groundwater; and

3) The concentrations of hazardous waste or hazardous waste constituents in the groundwater.

b) For each indicator parameter specified in Section 725.192(b)(3), the owner or operator must calculate the arithmetic mean and variance, based on at least four replicate measurements on each sample, for each well monitored in accordance with Section 725.192(d)(2) and compare these results with its initial background arithmetic mean. The comparison must consider individually each of the wells in the monitoring system and must use the Student's t-test at the 0.01 level of significance (see Appendix D) to determine statistically significant increases (and decreases, in the case of pH) over initial background.

c) Well Comparisons

1) If the comparisons for the upgradient wells made under subsection (b) show a significant increase (or pH decrease) the owner or operator must submit this information in accordance with Section 725.194(a)(2)(B).

2) If the comparisons for downgradient wells made under subsection (b) show a significant increase (or pH decrease) the owner or operator must then immediately obtain additional groundwater samples for those downgradient wells where a significant difference was detected, split the samples in two and obtain analyses of all additional samples to determine whether the significant difference was a result of laboratory error.

d) Notice to the Agency

1) If the analyses performed under subsection (c)(2) confirm the significant increase (or pH decrease) the owner or operator must provide written notice to the Agency – within seven days after the date of such confirmation – that the facility may be affecting groundwater quality.

2) Within 15 days after the notification under subsection (d)(1), the owner or operator must develop a specific plan, based on the outline required under subsection (a) and certified by a qualified geologist or geotechnical engineer for a groundwater quality assessment at the facility. This plan must be placed in the facility operating record and be maintained until closure of the facility.

3) The plan to be submitted under Section 725.190(d)(1) or subsection (d)(2) must specify all of the following:

A) The number, location, and depth of wells;

B) Sampling and analytical methods for those hazardous wastes or hazardous waste constituents in the facility;

C) Evaluation procedures, including any use of previously gathered groundwater quality information; and

D) A schedule of implementation.

4) The owner or operator must implement the groundwater quality assessment plan that satisfies the requirements of subsection (d)(3) and, at a minimum, determine each of the following:

A) The rate and extent of migration of the hazardous waste or hazardous waste constituents in the groundwater; and

B) The concentrations of the hazardous waste or hazardous waste constituents in the groundwater.

5) The owner or operator must make his first determination under subsection (d)(4), as soon as technically feasible, and prepare a report containing an assessment of the groundwater quality. This report must be placed in the facility operating record and be maintained until closure of the facility.

6) If the owner or operator determines, based on the results of the first determination under subsection (d)(4), that no hazardous waste or hazardous waste constituents from the facility have entered the groundwater, then he may reinstate the indicator evaluation program described in Section 725.192 and subsection (b). If the owner or operator reinstates the indicator evaluation program, he must so notify the Agency in the report submitted under subsection (d)(5).

7) If the owner or operator determines, based on the first determination under subsection (d)(4), that hazardous waste or hazardous waste constituents from the facility have entered the groundwater, then the owner or operator must do either of the following:

A) It must continue to make the determinations required under subsection (d)(4) on a quarterly basis until final closure of the facility if the groundwater quality assessment plan was implemented prior to final closure of the facility; or

B) It may cease to make the determinations required under subsection (d)(4) if the groundwater quality assessment plan was implemented during the post-closure care period.

e) Notwithstanding any other provision of this Subpart F, any groundwater quality assessment to satisfy the requirements of subsection (d)(4) that is initiated prior to final closure of the facility must be completed and reported in accordance with subsection (d)(5).

f) Unless the groundwater is monitored to satisfy the requirements of subsection (d)(4) at least annually the owner or operator must evaluate the data on groundwater surface elevations obtained under Section 725.192(e) to determine whether the requirements under Section 725.191(a) for locating the monitoring wells continues to be satisfied. If the evaluation shows that Section 725.191(a) is no longer satisfied, the owner or operator must immediately modify the number, location, or depth of the monitoring wells to bring the groundwater monitoring system into compliance with this requirement.

(Source: Amended at 42 Ill. Reg. 23725, effective November 19, 2018)